

Open Data Sharing and Open Innovation

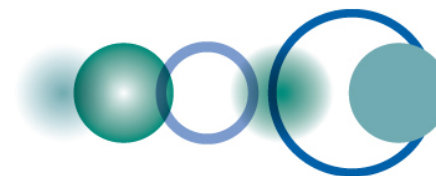
**GEO Summit Week in Mexico City
Side Event on Citizen GEOSS**

10 November 2015

(Hotel Hilton, Room Dona Sol)

**SCHOUPE Michel
European Commission
DG RTD**





The second decade of GEO (2016-2025)

“GEO Strategic Plan 2016-2025:
Implementing GEOSS”
(for Plenary decision this week)

Revised GEO Data Sharing Principles:

- **GEOSS data shared by default as open data**

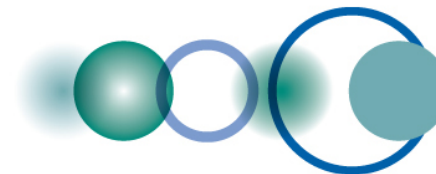
Draft GEO Data Management Principles:

- **Discoverability, accessibility, usability, preservation, curation**

GEOSS Architecture Principles

- **Openness, effectiveness, flexibility**





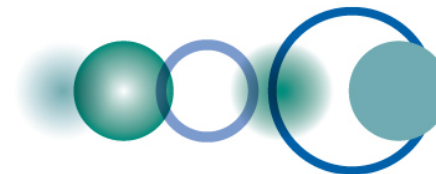
The GEOSS Data-CORE



The GEOSS Data Collection of Open Resources for Everyone is a distributed pool of “tagged” datasets with full, open and unrestricted access at no more than the cost of reproduction and distribution



<http://www.geoportal.org/>

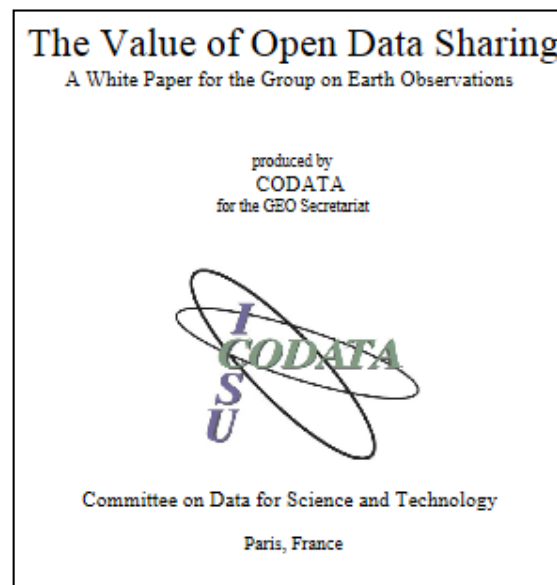


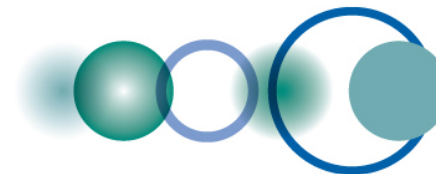
The value of open Data Sharing (Plenary Document 9 by CODATA et al.)

From restricted data policies to more open policies for government data

By showcasing benefits of open EO data:

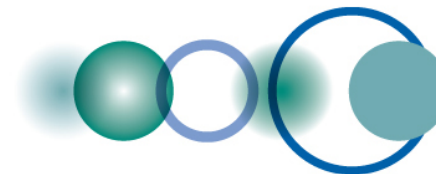
- **Economic** (creating value many times, value-adding industry)
- **Societal** (level playing field)
- **Research and Innovation** (integrity, reproducibility, efficiency, cross-disciplinary data intensive research)
- **Education** (best practices, new skills)
- **Governance** (improved decision-making, transparency and trust)





The European Union and Open Data

- 2011 - **Open Data Strategy**: a comprehensive open data package focused on public sector.
- 2012 - **EU Open Data Portal**: provides access to data held by the EU bodies (<http://open-data.europa.eu>)
- 2013 - Reinforced Directive on **Public Sector Information** (PSI): EU governments invited to make all documents reusable and its free provision (or at marginal costs) through open formats.
- 2013 - **G8 Open Data Charter** on benefits of Open Data
- 2014 - Open Access to Publications in H2020 and Pilot on **Open Access to Research Data**.

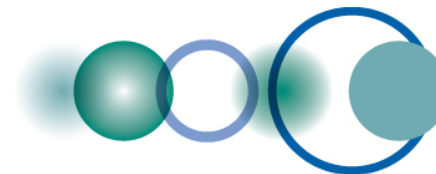


The European Union and Open Data (cont.)

- 2014 - Communication "***Towards a thriving data-driven economy***" with action plan focused on community building, framework conditions, enabling infrastructures and regulatory issues.
- 2015 – **Digital Single Market EU Strategy**,
Towards a European Open Science Cloud

Open data: an emerging global resource with high potential to:

- Enhanced innovation (enables new services)
- Enhanced efficiency (including quality and impact of publicly-funded research for society).
- Improved transparency, accountability, reproducibility



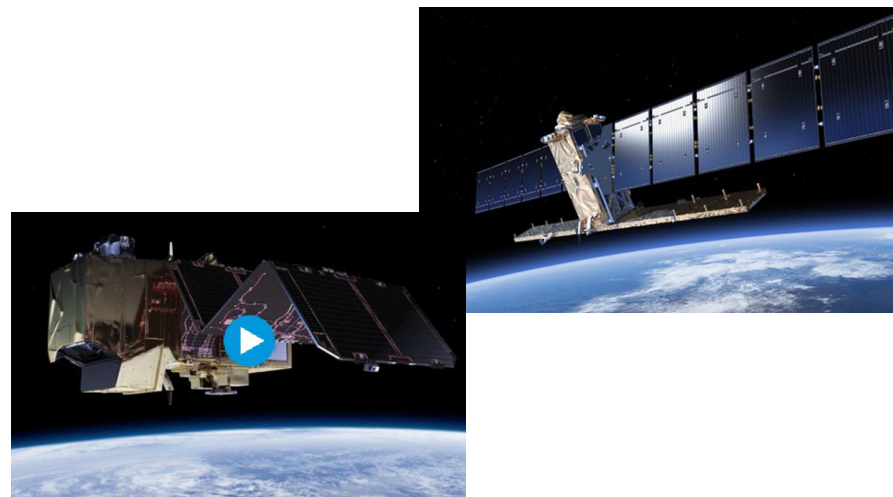
The EU Programme “Copernicus”

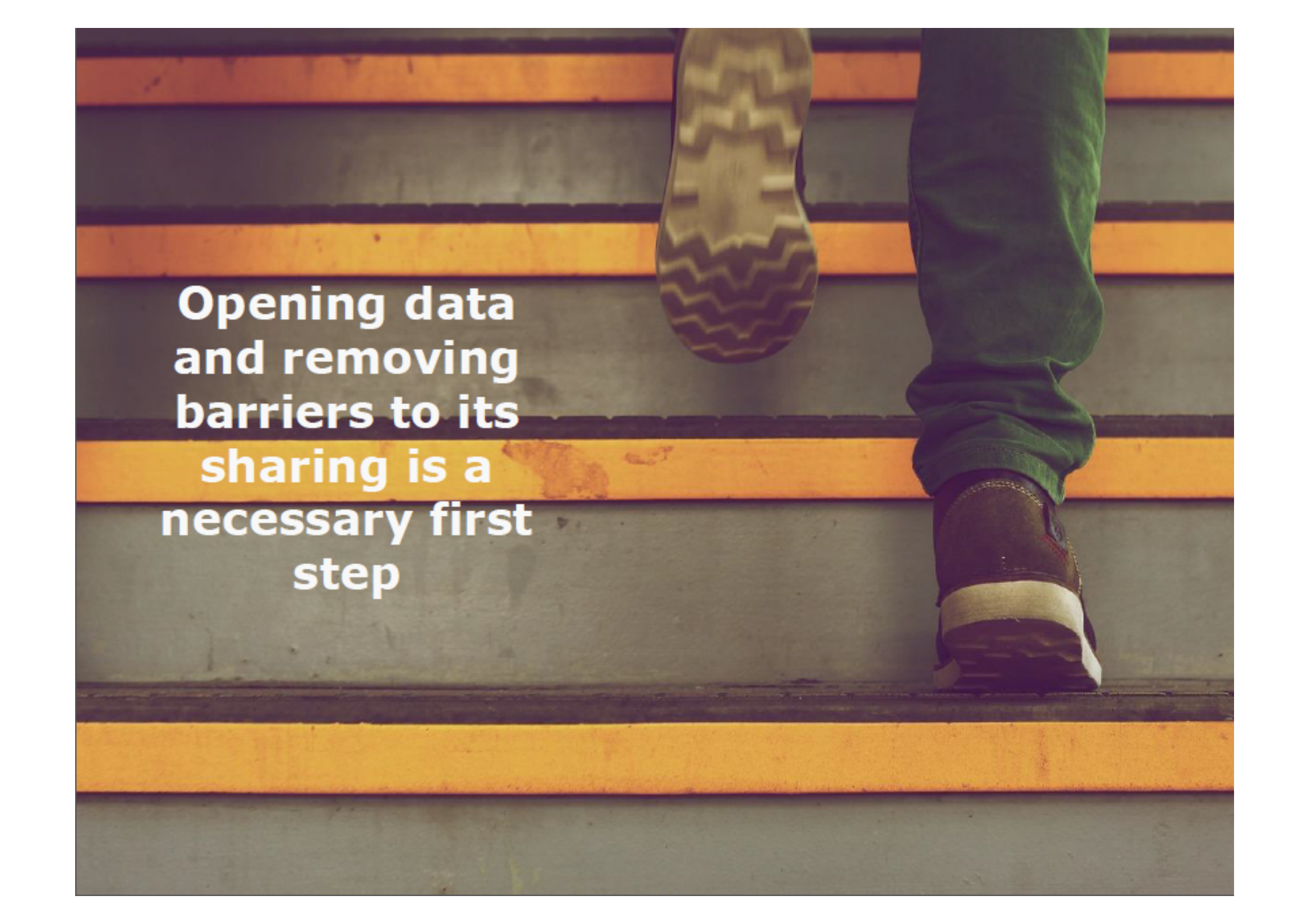
“Copernicus data and Copernicus information should be available freely and openly to support the Digital Agenda for Europe”

(Regulation (EU) No 377/2014 establishing the Copernicus Programme)

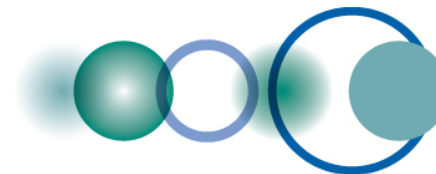
“GMES open dissemination should be fully compatible with GEOSS data sharing principles”

(Delegated Regulation (EU) No 1159/2013 on access to Copernicus data and infor.)



A photograph of a person's legs from the knees down, wearing green trousers and dark sneakers with white soles. They are standing on a staircase with grey steps and orange-painted edges. The person's right foot is on a higher step, while their left foot is on a lower step. The text is overlaid on the left side of the image.

**Opening data
and removing
barriers to its
sharing is a
necessary first
step**



Exploring the potential of Linked Open Data

- To mine the existing Open Data potential
- To bridge disparate data
- To add semantic connections between
INSPIRE/Copernicus/GEOSS and the Web of data



SWITCH-ON (2013 – 2017) Sharing Water-related information to tackle changes in the Hydrosphere

<http://www.water-switch-on.eu/>



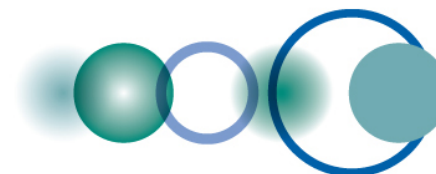
SmartOpenData (2013 – 2015) Linked Open Data for Environment Protection in Smart Regions -

<http://www.smartopendata.eu/>



MELODIES (2013-2016) Maximising the Exploitation of Linked Open Data in Enterprise and Science -

<http://www.melodiesproject.eu/>



MyGEOSS Project

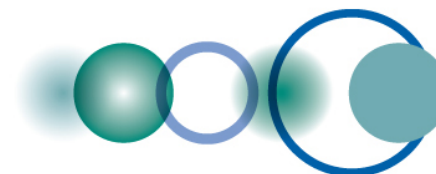
to promote innovative ‘apps’ addressing European citizens’ needs in relation to our changing environment



Commission initiative (DG RTD & JRC) to promote the development of innovative applications (mobile or web-based) using openly available data (including the GEOSS Data-CORE).

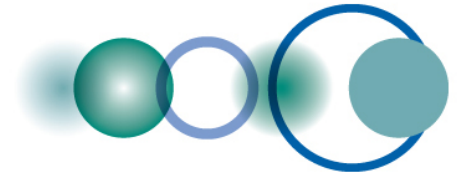
- ✓ Relevance of use in Europe
- ✓ Ease of use by non-expert users
- ✓ Innovative characteristics of the app
- ✓ Contribution to environmental or social objectives

Acknowledgment: next slides on MyGEOSS are based on material received from my colleagues Elena Roglia and Max Craglia (JRC)



To involve European Small Medium Enterprise more in GEOSS and harness the opportunities of using Full and Open access data contained in the GEOSS Data-CORE.





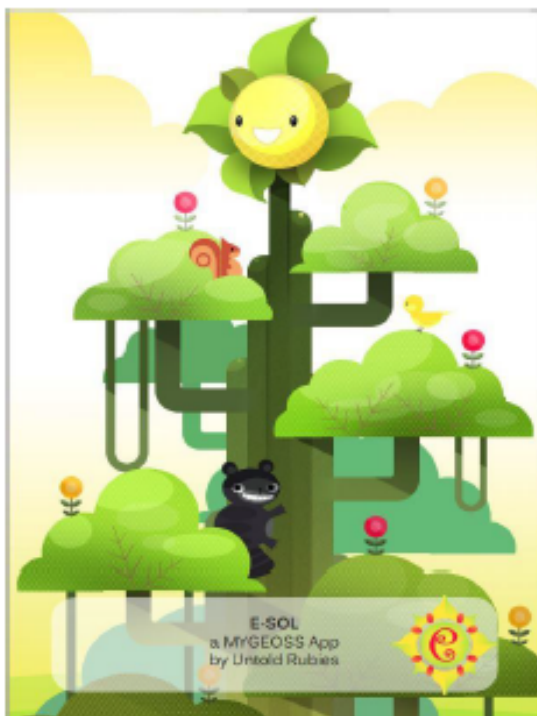
First MyGEOSS Call (18 March till 30 April 2015)



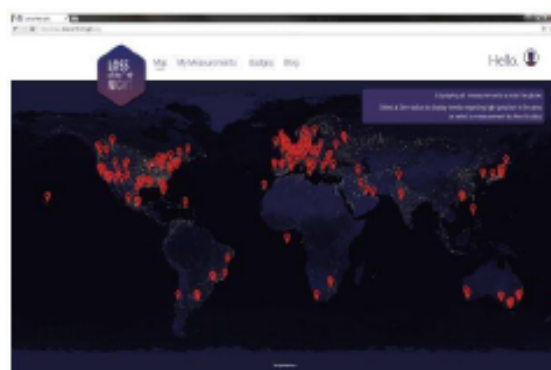
- 58 applications from 13 European countries
- 63 % of submissions by SMEs
- 27 % from Universities and Research Centres
- 10 % by Individuals

And the 11 winners are: ... ➔





E-SOL by Untold Rubies (game for 6-12 years old to raise awareness on air pollution)



Loss of the Night by interactive scape GmbH (To allow citizen scientists all over the world to collect quantitative information on the changing nighttime environment)



MYGEOSS Feedback by S[&]T corporation (user feedback on GEOSS data and services)

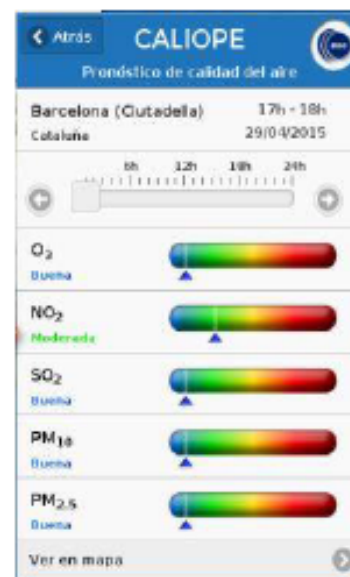


European
Commission



Know Your City! by UbikGS

(Social, economical
and environmental
indicators presented
on a map-based
view as a quiz)



Caliope by
Barcelona Super
Computing
Centre (Air
quality forecast
over next 24
hours of major
air pollutants)



**MYGEOSS Phenology App
Response** by Friedrich-
Schiller-University Jena
(A vegetation phenology
analysis performed using
satellite data and data
collected by citizens)

Joint
Research
Centre

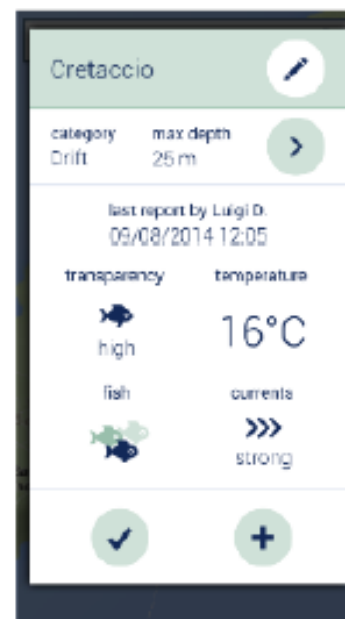




European
Commission

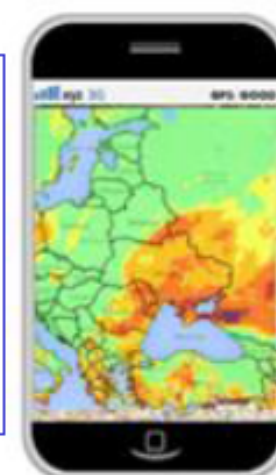


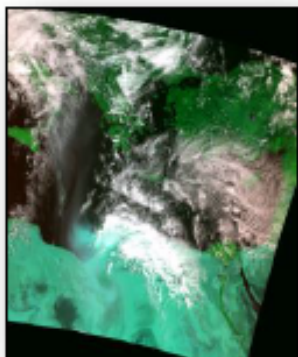
IASTracker by IC5Team (An app to locate Invasive Alien Species (IAS) using crowd-source data from citizens)



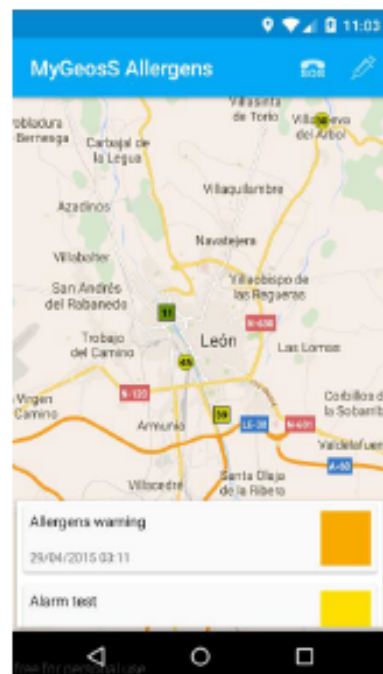
ScoobaSat by Proambiente S.C.R.L. (Divers info on water quality, transparency, temperature, fish abundance and current intensity.)

Geo-MAHA by GAP Consult Ltd. (An hazard alerts app to provide and collect information about flood, fire and other hazard related events)

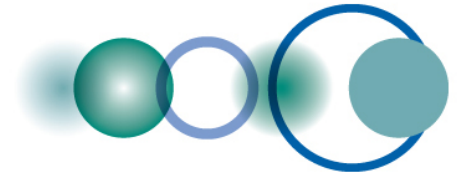




**Dust Storm
Monitoring by
University of Rome
La Sapienza (Near
Real Time Dust
Storms monitoring
and impact
assessment)**



GEO Allergens by Knowledge Valley (Allergens and contaminant alerts app with additional information about hospitals, medicines etc.)



Next MyGEOSS steps

- All data and source code of the apps will be full and open access, and contribute to the GEOSS Data CORE
- Winners of MyGEOSS Call 2 (performed in Autumn 2015) are being contracted.
- MyGEOSS Call 3 planned for Spring 2016.
- MyGEOSS will continue to raise awareness about the GEOSS Data CORE in Europe.
- The many lessons learnt will support the implementation of new Foundational Tasks in the next GEO Work Programmes.
- Extracting a subset of potentially useful datasets from the CORE has been a complex task. Better data labelling will be crucial.

Enjoy the winning 'apps' of Call 1

Thank you!



Find out more on MyGEOSS at:
<http://digitalearthlab.jrc.ec.europa.eu/mygeoss/call.cfm>